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Electric motor is considered to have passed the test, if the resonance of structural elements and assembly units is absent in the range of specified frequencies or the amplitude of Oscillations of any element, assembly unit does not exceed two times the amplitude of its point of attachment and if mechanical damages are not detected as a result of visual inspection.

3.10 While testing for the effect of increased relative humidity electric motor is placed in 'OFF' position with a detached protective band in a hygrostate with a relative humidity of air of 93-97% and temperature of 20-25°C and is held in it for five days.

Humidity may increase upto 98% and temperature upto +35°C due to variations of ambient temperature and modes of operation of testing equipment.

Before placing the electric motor in the hygrostat, it is necessary to preserve the output end of the shaft and mating surface of the cover from the drive side.

After the electric motor is taken out from the hygrostat it is checked within 3 minutes as follows:

- a) checking of insulation resistance as per the method of paragraph (item) 3.5. of present technical specifications.
- b) Checking of parameters as per the paragraph 3.4c; 3.4d of present technical specifications; "
- c) Absence of corrosion, except mounting surfaces, the anti-corrosive protection of which is designed in drawings;
- d) Intactness of varnished paint coatings.

After keeping the electric motor with a detached protective band under normal climatic conditions for 50 hours insulation resistance and electric strength of insulation are checked as per the para 3.5; 3.6 of present technical specifications.

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Electric motor is considered to have passed the test, if parameters meet the requirements of para 1.2.3et 1.2.3d of present technical specifications if peeling of paint work and traces of corrosion are absent and if electric strength and insulation resistance correspond to the requirements of para 1.2.4a; 1.2.5 of present technical specifications (with regard for the note to Paragraph 3.6).

3.11 During the test for the effect of decreased ambient temperature, the electric motor is placed in "OFF" state in a refrigerating chamber in which the temperature is decreased upto -50°C and is maintained with an accuracy of $\pm 3^\circ\text{C}$. On attainment of this temperature. Electric motor is kept in the chamber for four hours, after which consumed current is checked in the chamber per point 3.4c of the present technical specifications under consumed current is checked under normal climatic conditions within three minutes after the electric motor is taken out of the chamber.

Electric motor is considered to have passed the test, if it independently starts to rotates and consumes a current not more than 40%, not later than three minutes after switching on at rated voltage and rated power.

NOTE: Electric motor may be placed in refrigerating chamber in which temperature is reduced beforehand down to -50°C. In this case electric motor is kept in the chamber for 5 hours.

3.12 During the test for the effect of increased ambient temperature, temperature in the heat chamber is set to +70°C and is maintained with an accuracy of $\pm 3^\circ\text{C}$. Electric motor is kept in "OFF" state in the heat chamber for 4 hours.

Then electric motor is taken out of the heat chamber and within three minutes insulation resistance is measured as per the point 3.5 of present technical specifications and is checked by triple switching on at rated voltage as per the methods of point 3.19a of present technical specifications.

Electric motor is considered to have passed the test, if its is efficient at triple switching on and if it consumes a current not exceeding 40A, and if the insulation resistance is in conformity with para 1.2.4 of present technical specifications.

3.13 While testing for the stability to the effect of hour frost and dew electric motor is placed in "OPP" state in the refrigerating chamber and is kept in it for at a temperature of $-20 \pm 5^{\circ}\text{C}$ for two hours.

Then electric motor is taken out of the chamber and is placed under normal climatic conditions. Immediately after the electric motor is removed from the chamber, and after every thirty minutes measurements of parameters are taken in conditions of frost and dew formation as per method of point 3.4 the present technical specifications.

Electric motor is considered to have passed the test, if the parameters meet the requirements of point 1.2.3 B of the present technical specifications under normal climatic conditions after the removal of motor from the refrigerating chamber.

3.14. During the test for the effect of sea (saline) fog, electric motor with closed collector openings with preserved end of the shaft and with preserved mating surface of the cover from the side of the body is placed in the chamber in which temperature is $27-30^{\circ}\text{C}$ and is subjected to the effect of saline fog. Before placing in the chamber visual inspection is carried out for the absence of damaged of vermish and paint coatings.

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Electric motor is placed in the chamber so that during the test, solution splashes and drops from the ceiling walls and supporting structures do not fall on it.

Fog is produced by spraying with help of centrifugal aerosol generator or sprayer of saline solution. Saline solution is made by the dissolution of sodium chloride in distilled water in an amount of 3g ± 3 gms/litre as per GOST 4233-77. Fog should have dispersity of 1-10 M/LM (95% of drops) and water content of 2-3 gm/m³. Spraying of the solution is carried out for fifteen minutes after every forty five minutes. Total duration of the test is 2 days. The duration of the test is counted from the moment of first spraying of the solution.

At the end of the test, electric motor is cleaned with wads soaked in distilled water. Then the motor is dried at a temperature of + 55 ± 2°C for one hour. After subsequent cooling the motor is subjected to visual inspection.

Electric motor is considered to have passed the test, if no traces of corrosion of base metal and damage of varnish and paint coatings were detected.

3.15 During the test for resistance to cyclic temperature changes electric motor in "OFF" state is subjected to effect 3 cycles of temperature changes following continuously in succession.

Every cycle is conducted in the following sequence:
Electric motor is placed in refrigerating chamber in which the temperature is reduced down to -50°C in advance and the motor is kept at this temperature for four hours.

Immediately after the refrigeration chamber the motor is carried to the thermal chamber in which the temperature is +65°C and is kept in it at this temperature for 4 hours.

Time of keeping of the motor in the thermal and cold chambers is counted from the moment of attainment of specified temperature in the chamber after the loading of the motor.

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After the end of the test, test cycle, the electric motor is taken out of the thermal chamber and is kept under normal climatic conditions for 4 hours.

Then visual inspection of the electric motor is carried out and efficiency is checked as per paragraph 3.48; 3.45 of (use Russian letter indication) the present technical specification.

Electricmotor is considered to have passed the test, if its parameters comply with the requirements of paragraph 1.2.38, 1.2.37 of present technical specifications.

NOTE:
It is allowed to carry-out the test for resistance to cyclic temperature changes in one chamber in which rate of change of temperature is not less than 0.5°C per minute.

3.16 Vibration strength is tested in "OFF" state of the electric motor. Before the test visual inspection of the electric motor is carried out.

Electric motor is mounted on the stand with single component vertical vibration in a horizontal position and is tested by the method of fixed frequency as per the norms given in the given TABLE 3.

TABLE - 3

FIXED FREQUENCY, Hertz	VALUE OF AMPLITUDE acceleration, displacement mm	Total dura- tion of tests hours
10	1.0	2.0
20	2.0	1.0
30	3.0	0.8
40	4.0	0.6
50	4.0	0.4
60	0.5	4.5
80	Corresponds to	
80	acceleration.	
100		1.5
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NOTE: Check by one of the methods by acceleration or or displacement.

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Vibration strength and Guarantee life tests are carried out simultaneously as per the following modes:

1/4 of total vibration period before testing for Guarantee service life, 1/2 of total vibration period in the middle of testing for Guarantee service life and 1/4 of total vibration period after testing for Guaranteed service life.

After testing visual inspection is carried out and parameters are checked as per the paragraph 3.4a, 3.4B, 3.4F of present technical specifications.

Electric motor is considered to have passed the test, if during the visual inspecting no mechanical damages were detected and if the parameters meet the requirements of paragraph 1.2.3a; 1.2.3B, 1.2.3F of present technical specifications.

3.17 In the middle of the test for Guarantee life impact strength is tested in OFF state of the electric motor. Before testing visual inspection of it is carried out.

Electric motor is placed on the stand in horizontal position and is subjected to impacts as per the norms given in the Table 4.

TABLE 4

Acceleration, g	Pulse duration ms	Total number of impacts	Number of impacts per minute
15	From 10 to 15	2000	upto 100

After testing visual inspection is carried out and parameters are checked as per the paragraph 3.4a, 3.4B, 3.4F of present technical specifications.*

3.18 Testing in conditions of decreased atmospheric pressure is carried out in decompression chamber at a temperature of $+25 \pm 10^{\circ}\text{C}$.

* Electric motor is considered to have passed the test if mechanical damages are not detected during visual inspection and if parameters meet the requirements of Paragraphs 1.2.3a, 1.2.3B, 1.2.3F of present technical specifications.